

The National Institutes of Health runs a campaign against noise-induced hearing loss, called "Wise Ears," that emphasizes basic steps like wearing earplugs when operating power tools and moderating the volume on personal listening devices. The ubiquitous music players, which send sound directly down the ear canal, are a potential problem for millions of Americans, young and old. In a recent informal study at the House Ear Institute, researchers found that the new generation of digital audio players, with their exceptional clarity, allow listeners to turn up the volume without the signal distortion that occurs with traditional analog audio. Without distortion, which serves as kind of natural volume governor, listeners may be exposed to unsafe sound levels without realizing it. In preliminary observations, the music at the eardrum topped 115 decibels. Exposure to noise that loud for more than 28 seconds per day, over time, can cause permanent damage.

Kathy Peck, who learned the hard way about the dangers of loud music, has dedicated herself to helping other musicians avoid her fate. Along with Dr. Flash Gordon, the physician from the Haight Ashbury Free Clinic who helped with her hearing loss 20 years ago, Peck cofounded Hearing Education and Awareness for Rockers (HEAR). Since its inception in 1988 (with seed money from the Who's Pete Townshend, whose hearing was also trashed by loud music), the group has helped thousands of young rockers, distributing free earplugs at clubs, concerts and music festivals, and providing free screenings by audiologists.

For more than 6 million Americans, hearing aids are the best available solution for everything from mild to profound hearing loss. Today's digital devices, like the analog instruments that preceded them, amplify sound and transmit it down the ear canal to the eardrum. But the similarities end there. Thanks to digital technologies, modern aids offer better sound quality (above). Top-of-the-line models feature "directional" or "high definition" hearing. These devices use two microphones and an algorithm to enhance sound coming from the front (the person you are talking to), while tuning down sound coming from behind (the rest of the noisy party).

Despite such encouraging technical advances, there are about 21 million people in the United States who could benefit from hearing aids, but don't use them. Many simply can't afford them. Their costs range from a few hundred dollars for a basic analog device to \$3,500 for high-end instruments, and are rarely covered by insurance. Another reason some folks eschew aids is discomfort—they simply don't like the feeling of walking around with a plugged ear canal. And even with digital technology, people can still have difficulty separating speech they want to hear from the background noise, a common hearing-aid problem. Yet another obstacle to wider use is stigma—many people associate hearing aids with aging, Slattery says, and would just as soon cup a hand behind their ear. "They're afraid to look old, but they don't mind looking dumb."

A new generation of implantable and semi-implantable hearing aids, currently being developed and tested, could solve many of these problems. Unlike conventional aids, the new devices transmit sound vibrations directly to the bones in the middle ear, bypassing the eardrum and improving speech perception. "You can amplify the higher frequencies without feedback problems," says Slattery, "and that gives a richness to the sound. It's the high frequencies that help you localize sound and hear better in noisy situations." Other pluses: no clogged ear canal and no visible sign of infirmity. But

until insurance companies start paying for hearing aids (they are under increasing pressure to do so), the \$15,000-to-\$20,000 devices—intended for those with moderate to severe hearing loss—will remain out of reach for most.

A more permanent solution to hearing loss—regenerating damaged cochlear hair cells—is the shared goal of a scattered band of researchers around the country. Unlike birds and other lower vertebrates, which can regenerate hair cells, humans and other mammals get one set, and that's it. If scientists can discover a way to grow new hair cells in humans, exciting new treatments could be devised. Already, researchers at the University of Michigan have used gene therapy to grow new hair cells in guinea pigs. At the House Ear Institute, Andrew Groves and Neil Segil are studying the embryonic development of hair cells in genetically engineered mice. If they can unravel the process, figure out how it starts and why it stops in mammals, they may eventually be able to reactivate the cells and have them make new hair cells. In a related experiment, they have managed to coax some embryonic cochlear cells in mice to restart and become hair cells. "This is new stuff," says Segil, with the calm that often masks excitement in scientific circles.

"If you are going to have a hearing loss, this is the best time to do it," says Char Sivertson, who began to lose her hearing without discernible cause when she was a teenager. Sivertson is downright enthusiastic about things like closed captioning. "It's incredible; now I'm not left out of TV," she says, and ticks off other high-tech advances, such as digital hearing aids and phones that can be "tuned" to improve the clarity of the caller's voice.

But Sivertson, an activist member of the Association of Late-Deafened Adults (ALDA), a support group, wasn't always so gung-ho. "I was in denial for years and years," she says. "I tried to pass for hearing, which was ridiculous." Sivertson was using hearing aids by the age of 24, but it was another 20 years before she fully accepted her fate. And there were some dark days in between. Every few years, her hearing would suddenly get worse. After one such drop, "I was very depressed," says Sivertson, now 57. "I wasn't exactly suicidal, but I was thinking, 'I'm not sure life is going to be very meaningful for me from this point on'."

Sivertson faced a myriad problems while raising her two sons, Dak and Matt. When there was a school matter or some other issue to discuss, her sons tended to bypass her and go to their dad, Larry, who has normal hearing. "Kids don't want to repeat themselves and stuff like that," says Larry Sivertson. "It's up to the hearing spouse to make sure that the person with hearing loss is involved." Char Sivertson found peace of mind through her association with ALDA. Joining such a group, she says, "is the No. 1 thing you can do for yourself" if you develop hearing loss later in life.

And here's something you can do before you reach that point—learn to appreciate what you already have. Says Yale's Rabinowitz: "If you are watching your diet, if you are exercising, then protecting your hearing should be part of your lifestyle." Sounds good to us.

GRANTS UNDER THE NATIONAL FLOOD INSURANCE PROGRAM

Mr. NELSON of Florida. Mr. President, on Sunday afternoon, Hurricane Dennis made landfall on Florida's Gulf Coast, causing billions of dollars in

damage, taking four lives and bringing back terrible memories of last summer's four hurricanes. Some people in north Florida were still recovering from Hurricane Ivan when Dennis struck.

I was down in Pensacola on Monday and saw the damage wrought by Dennis. People are still without power in the summer heat. Food, clean water and ice are absolutely vital right now. Many coastal areas, like the small village of St. Mark's, were deluged by water from the ten foot storm surge. Mitigation helps us to better prepare for future storms, lessens their impact and saves lives.

Last summer, when the Internal Revenue Service ruled that FEMA mitigation grants must be reported as taxable income, I worked to advance a bill ensuring they were exempt from Federal taxes. This bill was signed into law by the President on April 15. Each year, hundreds of Floridians use mitigation grants to protect their lives and property from future natural disasters. Now they know for sure that accepting a mitigation grant to flood proof their home won't result in higher taxes.

Yet even with this relief, another IRS ruling is causing problems with the flood insurance program. That's because according to the IRS, a National Flood Insurance Program, NFIP, grant must be included as income. This could make some recipients ineligible for crucial Federal assistance programs like Food Stamps, aid to dependent children and Medicaid. No one should have to choose between making their home safe from flooding and food or medicine. No other kind of emergency assistance granted by FEMA counts toward income and neither should flood mitigation grants.

I'm pleased to sign onto legislation introduced by my colleague from Florida which would prevent Federal agencies administering means-tested benefits from counting NFIP grants as income. I hope the Senate will consider this legislation quickly and provide peace of mind to Floridians and other Americans living in disaster prone areas of the country.

ADDITIONAL STATEMENTS

CONGRATULATING MS. SHANNON MURPHY

• Mr. BUNNING. Mr. President, today I rise to congratulate Ms. Shannon Murphy of Louisville, KY. Ms. Murphy recently completed the 2004-2005 United States Holocaust Memorial Museum's Teacher Fellowship Program.

The Museum Teacher Fellowship Program develops a national corps of skilled secondary school educators who will serve as leaders in Holocaust education in their schools, their communities, and their professional organizations. In August of 2004, Ms. Murphy participated in a summer institute at the Museum designed to immerse